

Erythea, these last at the base of the mountains. In the southern third of the peninsula many distinctly tropical genera appear, such as *Ficus*, *Mimosa*, *Cassia*, *Albizzia*, *Jatropha*, *Haematoxylon*, *Lantana*, *Manihot*, and *Chiococca*.

Among the more remarkable endemic desert forms, two trees may be mentioned. One, belonging to the Anacardiaceae, *Pachycormus discolor*, is found in the extremely arid central section of the peninsula. Seldom 10 ft. in height, the branches often shoot out twice that distance from the trunk, while their thickness (1 ft. or more), their abrupt ending in a few short twigs covered with red flowers, "reminding one of the proboscis of an elephant holding a nosegay," give a remarkably grotesque appearance to the tree. The leaves are minute and fall off before the flowers are fully developed. The associated monotypic genus *Idria columnaris* is in the Fouquieriaceae, and appears as a tree reaching 50 ft. in height in a scattered open forest. In contrast with the preceding it has a straight columnar trunk, usually without large branches. Illustrations of these and many other interesting and unusual plants add much to the interest of both reports.—GEO. D. FULLER.

Rubus in New England.—BRAINERD and PEITERSEN,²¹ recognizing that "*Rubus* is one of the most polymorphic genera in the entire plant kingdom," have presented the blackberry group of that genus as displayed in New England. The authors say that the remarkable variation in the number of species recognized in the various taxonomic works is due to too great reliance upon herbarium specimens, to failure to appreciate the variations due to environmental conditions, and to lack of appreciation of the extent of interbreeding. The present study is based upon data from material in the field, behavior in garden cultures and controlled plots, characters of the progeny of supposed natural hybrids, and behavior of progeny when artificially crossed. The result is that the authors recognize twelve valid species of New England blackberries, and a long list of hybrids:

In following up the experimental work, PEITERSEN²² has reached the following conclusions: variations due to external factors are very marked; primordia of the prickle, glandular hair, and simple hair are present in all species; a large percentage of infertility occurs in most species, largely due to defective pollen; cross pollination is the rule in all species, all the species studied being either nearly or completely self-sterile; all the species are capable of inter-crossing under favorable conditions; duplicates of natural hybrids were produced artificially; the progeny of a number of so-called species segregated as hybrids.

The paper is a good illustration of the test of genetics applied to taxonomy.—J. M. C.

²¹ BRAINERD, EZRA, and PEITERSEN, A. K., Blackberries of New England; their classification. Bull. 217, Vermont Agric. Exper. Sta. pp. 84. pls. 36. 1920.

²² PEITERSEN, A. K., Blackberries of New England; genetic status of the plants. Bull. 218, Vermont Agric. Exper. Sta. pp. 34. pls. 19. 1921.